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The Green Economy's Impact on the Status of agricultural Farmers: Special Reference Shindhanur

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Abstract:
The topic of agriculture in a green economy is highly declared in the modern world, so how does the agriculture of Sindhanur taluk perform in a green economy? When we look at the conditions of farmers and workers based on the growth of happiness, environmental protection, agricultural practices, and sustainability, along with the conditions of workers, the condition of the workers is fully explained. Farmers have a minimum of two acres to a maximum of 30 acres of land. The income is seen from 80,000 to 20 lakhs. The income level is high, which means the amount of land use is high. Their annual expenditure is seen from 35,000 to 85,000. The amount of savings is above 2,358,000 annually. Small landholders are also seen as large landholders. Their economic condition is good. Their social, educational, and health conditions are seen at a moderate level. Overall, this article also explains the aspects of what agriculture looks like in a green economy of agricultural workers and farmers. This demonstrates a promising shift towards sustainable practices that not only benefit the individual landholders but also contribute positively to the environment. By adopting eco-friendly methods, these farmers can enhance their productivity while ensuring the preservation of natural resources for future generations.

Introduction:
Agriculture within a Green Economy Transitioning to a sustainable global economy is vital. Agriculture offers substantial prospects for development, investment, and employment. Agriculture is essential for all. Agriculture sustains our whole population and generates fibre for apparel, feed for cattle, and biofuels. In developing countries, agriculture plays a crucial role in GDP growth, facilitates poverty alleviation, and provides the majority of employment opportunities, particularly due to its substantial capacity to mitigate carbon emissions and assist vulnerable populations in adapting to climate change. We must enhance the sustainability of the global economy. Agriculture offers substantial prospects for development, investment, and employment.
All individuals require agriculture. Although attaining food and nutrition security via sustainable rural livelihoods and environmental management is vital, the inquiry emerges regarding the methods to accomplish this goal. One-sixth of the global population experiences hunger today, while population and wealth growth are driving more production and consumption within the regenerative and adaptive limits of our planet. Agriculture has diminished biodiversity. It not only harms the environment but also jeopardises the soil's health and the lives of farmers reliant on it. A fundamental transformation is

required to enhance agricultural sustainability by integrating environmental stewardship with economic competitiveness.

A green economy may significantly contribute by offering the necessary technologies, legislation, and financial assistance to advance sustainable agriculture methods. Eco-Friendly Economy and Sustainable Agriculture The United Nations Environment Programme (UNEP) defines a green economy as one that enhances human well-being and promotes social fairness. It also markedly diminishes environmental hazards and deficiencies. The notion of a green economy underscores low-carbon, resource-efficient, and socially inclusive development.

This article also explores the impact of agriculture on the economy, as the overall population in Sindhanur Taluk is estimated to be well-off, with agricultural owners and workers engaged in rural agriculture. The fertile land and favourable climate, which enable diverse crop production, are responsible for this affluence. Furthermore, the integration of modern farming techniques has significantly enhanced productivity, contributing to the region's economic stability and growth.

A History Timeline about Green Economy

"The history of the green economy can be traced back to the environmental movements of the 1960s and 1970s, which raised concerns about the negative impacts of industrialization on the environment. This led to a growing recognition of the need for sustainable development and the concept of a green economy emerged.

In the 1980s and 1990s, international agreements like the Rio Earth Summit in 1992 brought global attention to the importance of integrating environmental sustainability into economic development. This led to the adoption of policies and practices that aimed to promote a more sustainable and environmentally friendly economy.

In the early 2000s, there was a significant shift in focus towards renewable energy and clean technologies. Governments and businesses started investing in renewable energy sources like solar, wind, and hydro power, and promoting energy efficiency measures. This marked the beginning of a transition towards a low-carbon economy.

The global financial crisis of 2008 brought further attention to the need for a green economy as governments sought to stimulate economic growth while also addressing environmental concerns. Many countries started incorporating green measures into their economic recovery plans, such as investing in green infrastructure and promoting sustainable industries.

Since then, the green economy has continued to evolve and grow. It encompasses various sectors such as renewable energy, sustainable agriculture, green building, and eco-tourism. Governments, businesses, and individuals are increasingly recognizing the economic potential of green industries and the importance of transitioning towards a more sustainable and resilient economy.

The timeline of the green economy is characterized by a shift in mindset from traditional economic models to one that prioritizes environmental sustainability. It reflects the growing awareness of the finite nature of natural resources and the need to protect the environment for future generations. As the world faces pressing challenges such as climate change and resource depletion, the green economy offers a pathway towards a more sustainable and prosperous future"(https://historytimelines.co/timeline/green-economy-).

Agriculture, a green economy emphasises the following principles:

- Sustainable resource usage involves managing water, land, and soil efficiently to guarantee future generations have access to these resources.
- Developing climate-resilient agricultural methods, including drought-resistant crops, enhanced irrigation systems, and soil conservation measures, is crucial for adapting to climate change.
- Biodiversity conservation includes agroforestry, agricultural diversification, and organic farming practices.
- Carbon footprint reduction involves lowering greenhouse gas emissions from agricultural activities, including by minimising the use of chemical fertilisers and encouraging sustainable alternatives.
- We are promoting social inclusion by ensuring that everyone, including smallholder farmers, women, and marginalised populations, can benefit from green economic advantages.
- Integrating these concepts into agriculture has the potential to considerably enhance the sector's long-term sustainability, raise farmer incomes, and help alleviate the negative consequences of climate change.

Review of the Literature:

01. Edward Barbier: A leading environmental economist, often cited for his early work on the concept of green economy, including "Blueprint for a Green Economy" (co-authored with David Pearce and Anil Markandya). While this is a seminal text, his later works often examine policy implications that resonate at the national and sub-national levels. Barbier's insights have significantly influenced discussions on sustainable development, encouraging policymakers to integrate environmental considerations into economic planning. His research is still inspiring new approaches to balancing economic growth with ecological preservation.

02. United Nations Environment Programme (UNEP): UNEP is the leading international organisation in defining and promoting the green economy globally. Their reports, publications, and initiatives provide conceptual frameworks and practical guidance that influence local-level policies and plans. Their "Green Economy Initiative" and related publications have been particularly influential. These efforts are crucial in fostering sustainable practices that address climate change and promote social equity. By collaborating with various stakeholders, UNEP aims to create a comprehensive approach that empowers communities to thrive within a green economy framework.

03. OECD (Organisation for Economic Co-operation and Development): The OECD has published extensively on green growth and the green economy, often providing policy recommendations and data analysis that can be adapted to local contexts. Governments and organisations seeking to implement effective environmental policies find this wealth of information to be a valuable resource. Furthermore, the OECD's emphasis on innovation and sustainable technologies highlights the importance of investing in research and development to drive long-term economic resilience.

04. Tim Jackson: Known for his work on "prosperity without growth," Jackson's critiques of traditional economic models and exploration of alternative paths to well-being have serious consequences for local economies seeking sustainable development. His work discusses community-level initiatives. These initiatives often prioritise social equity and ecological balance, demonstrating that sustainable development can be both achievable and beneficial at the grassroots level. By fostering collaboration among local stakeholders, Jackson advocates for a holistic approach that integrates economic, social, and environmental dimensions to create vibrant communities.

5. Institute for European Environmental Policy (IEEP): Organisations such as IEEP frequently conduct research and publish reports on green economic policies and their implementation at various scales, including regional and local. IEEP's Patrick ten Brink, Leonardo Mazza, and others have contributed to publications such as "Nature and Its Role in the Transition to a Green Economy." This publication emphasises the importance of ecosystems in achieving sustainable development goals. By fostering collaboration among diverse groups, they aim to inspire innovative solutions that benefit both people and the planet.

06. Abhishek Jain (Fellow & Director - Green Economy and Impact Innovations, CEEW) and Gunjan Jhunjanwala are the lead authors of reports such as "How Green Economy Can Deliver Jobs, Growth and Sustainability in Odisha" (2025). Their work focuses largely on the economic opportunities and job creation potential of green transitions at the state level. Their research highlights the importance of a sustainable approach that aligns environmental goals with economic development. By engaging stakeholders from various sectors, they seek to create a roadmap that not only addresses climate challenges but also enhances livelihoods and promotes social equity.

07. Prof. Anil K. Gupta, Smt. Preeta Acharya, Dr. Shweta Baidya, Smt. Mahak Agarwal, and Smt. Shruti Bansal are the authors of training manuals and reports in this field. Here, we mention P.S. Kamble, affiliated with Shivaji University in Kolhapur, and his research student, Vishal Vishnu Oval. Their doctoral research and publications primarily delve into the concept of green economy for sustainable development in India, encompassing its regional implications. His work, "Green Economy: A Design for Sustainable Development in India," provides fundamental insights. These contributions illustrate the value of integrating ecological considerations into economic planning. By highlighting successful case studies, they aim to inspire policymakers and stakeholders to adopt more sustainable practices across various sectors.

Investigative Enquiries:

1. Can the promotion of a green economy enhance farmers' income?
2. What is the effect of the green economy on the integrated agricultural system?
3. What is the function of innovative technologies in the green economy?
4. What measures can be implemented to sustain the equilibrium of natural resources within a green economy?
5. What is the significance of agriculture in the advancement of a green economy?

Objectives of the Research:

1. To assess the welfare of farmers within the green economy.
2. To assess the risks associated with agriculture and environmental conservation.

Scope of Research:

The current research reflects the " The Green Economy's Impact on the Status of agricultural Farmers (Special reference Shindhanur)" The present research title is indicative of the investigation. In 2012, the research incorporates aspects of the green economy to analyse the impact of environmental protection and diverse sustainable production strategies on the green economy. Rural regions with a significant percentage of agricultural farmers have been designated as 'random sample' areas due to their social and

economic underdevelopment. A total of 40 farm labourers and proprietors have been chosen in the designated region.

Methodology of Research:

Data is gathered through two methods, specifically primary and secondary, concerning the research topic " The Green Economy's Impact on the Status of agricultural Farmers (Special reference Shindhanur)" This study encompasses 40 families residing in rural agricultural areas. This study utilises both secondary and primary data, with a primary focus on secondary data. The article has been developed using the methodologies outlined below, based on primary data within the experimental framework.

Data Analysis:

Agricultural land area:

Agricultural land area is another critical factor influencing the productivity and sustainability of farming practices. The limited access to essential resources, combined with inadequate infrastructure, poses significant challenges for these farmers, hindering their ability to maximise yields and improve their livelihoods.

SL No	Agricultural Land Area	Frequency	Parentage
01	No	02	05%
02	2-10 acres	23	57.5%
03	10-30 acres	09	22.5%
04	Above 30 acres	06	15%
Total		**40**	**100**

(Field Work: 2025)

The above table shows the details of the agricultural land area of farmers in agriculture. Out of the total 40 farmers, 5% of the informants do not have land. 57.5% of the farmers possess between 2 and 10 acres, indicating that a significant majority operate on relatively small plots. This distribution suggests a reliance on intensive farming methods to maximise output from limited resources.

Production of the Agriproduct:

Production of the Agriproduct is essential for ensuring food security and supporting local economies. By adopting sustainable practices, farmers can enhance yield while minimising environmental impact.

SI no	Annual Production of the Agriproduct	Annual Tunes	Parentage
01	Maize	06	15%
02	Corn	04	10%
03	Vegetables	01	2.5%
04	Rice	26	65%
05	Sea cucumber	03	7.5%
Total		40	100

(Field Work: 2025)

The above table shows the crops grown by the farmers, which are only a few tonnes per year. 15 percent of the farmers grow six tonnes of maize annually. 10 percent grow 4 tonnes of vegetables. 2.5 percent grows 1 tonne of vegetables. 65 percent grow 26 tonnes of rice annually. 7.5 percent grow 3 tonnes of seeds. Overall Sindhanur taluk grows more rice. This trend highlights the region's reliance on rice cultivation, which likely plays a significant role in the local economy. Additionally, the limited diversity in crop production may pose challenges for food security and sustainability in the long term.

Annual Income:

Annual Income The analysis reveals significant trends and patterns in annual income across various demographics. By examining these figures, we can gain valuable insights into economic disparities and opportunities for improvement.

SI no	Annual Income	**Frequency**	**Parentage**
01	80,000-1,00,000	12	30%
02	1,0000-1,50,000	15	37.5%
03	1,50,000-2,00000	09	22.5%
04	2,000000 Above	04	10%
Total		40	100

(Fieldwork: 2025)

The above table and map show the details of annual income in agriculture. Out of the total 50 women, 30 percent of the informants were earning between 80,000 and 100,000. 37.5 present of the respondents reported incomes of 10,000-150,000. 22.5 present of the respondents reported incomes of 150,000-200,000. 10 present of the respondents reported incomes of more than 20,000. Overall, incomes in agriculture appear to be low.

Annual Expenditure:

Annual Expenditure is similarly constrained, with many respondents indicating that their expenses often exceed their income. This financial strain highlights the challenges faced by women in the agricultural sector, necessitating further investigation into support mechanisms and potential improvements in income-generating opportunities

SL No	**Annual Expenditure**	**Frequency**	**Parentage**
01	35.000-40.000	19	47.5%
02	40.000-45.000	08	20%
03	45000-85.000	09	22.5%
04	85.000 Above	04	10%
Total		**40**	**100**

(Fieldwork: 2025)

The above table shows the details of expenditure in agriculture. Out of the total 50 women, 47.5 present of the respondents spent 35,000–40,000. 20 present of the informants spent 40,000–45,000. 22.5% of the respondents spent 45000-85000. 10% of the respondents spent more than 85,000. Overall, the income in agriculture appears to be low.

Annual savings:

Annual savings are crucial for improving financial stability among these women. Encouraging them to allocate a portion of their income towards savings could help mitigate the challenges posed by fluctuating agricultural yields and expenses.

SL No	Annual Savings Rate	Frequency	Parentage
01	23.000-32.000	18	45%
02	32,000-45,000	10	25%
03	45,000-58,000	09	22.5%
04	58,000Above	03	7.5%
Total		**40**	**100**

(Field Work: 2025)

The above table shows the details of savings in agriculture. Out of the total 40 respondents, 45% of the respondents were saving Rs 23,000-32,000. 25% of the respondents were saving Rs 32,000–45,000. 22.5% of the respondents were saving Rs. 45,000–58,000. 7.5% of the respondents were saving Rs 58,000 and above. Overall, the savings in agriculture appear to be low.

Health Status:

Health Status The health status of the respondents may significantly influence their ability to save. It is essential to consider how various health factors, such as access to healthcare and overall well-being, can impact financial stability and savings habits in agricultural communities.

SL No	Health Status	Frequency	Parentage
01	Fever	17	42.5%
02	Cancer	14	35%%
03	Joint Disease	05	12.5%
04	Malnutrition	04	10%
Total		**40**	**100**

(Field Work: 2025)

The above table shows the health status of women workers in agriculture. Out of the total 40 farmers, 42.5% of the informants reported a fever problem. 35% of the informants reported a TV disease problem. They were saving. 12.5% reported sugar and BP problems. 10% reported a malnutrition problem. Overall, malnutrition is a major problem among farmers.

Educational status:

Educational status is another critical factor influencing the health of women workers in agriculture. Many of these individuals lack access to proper education, which can hinder their understanding of nutrition and health care, thereby exacerbating existing health issues. Addressing both health and educational disparities is essential for improving the overall well-being of these farmers.

SL No	Educational Status	Frequency	Parentage
01	Illiteracy	06	15%
02	Primary Education	12	30%
03	Higher Education	10	25%

04	Post-Graduation	04	10%
05	Graduation	05	12.5%
06	Above Graduation	03	7.5%
Total		**40**	**100**

(Field Work: 2025)

The above table shows the details of the educational status of the farmers. Out of the total 40 farmers, 15% of the informants are illiterate. 30% of the informants are primarily educated. 25% are secondary educated. 10% are high school educated. 12.5% are pre-graduation educated. 7.5% are graduate educated. Overall, the educational status of farmers is low.

Working hours per day:

Working hours per day are typically long, often exceeding eight hours, which further exacerbates the financial strain on these individuals. Despite the demanding conditions, many workers remain reliant on these wages to support their families and sustain their livelihoods.

SL No	**Working hours per day**	**Frequency**	**Parentage**
01	5 hours	09	22.5%
02	6 hours	10	25%
03	7 hours	16	40%
04	Above 8 hours	05	12.5%
Total		40	100

(Field work: 2025)

The above table shows the details of the working hours of farmers in agriculture. Out of the total 40 farmers, 22.5% of the informants are working in a 5-hour period. 25% of the informants are working in a 6-hour period. 40% of the informants are working in a 7-hour period. 12.5% of the informants are working in a period of more than 8 hours. Overall, farmers' efficiency in agriculture varies widely.

Infrastructure:

Infrastructure improvements and access to modern tools can significantly influence their productivity. Additionally, factors such as weather conditions and market demand also play crucial roles in determining the working hours and overall efficiency of these farmers.

SL No	**Infrastructure**	**Frequency**	**Parentage**
01	Clean drinking water	08	20%
02	Transport	15	37.5%
03	Clothing	08	20%
04	Electricity	09	22.5%
Total		**40**	**100**

(Fieldwork: 2025)

The above table shows the details of the basic facilities farmers have in agriculture. Out of the total 40 women, 20% of the informants see drinking water infrastructure. 37% of the informants see transport

infrastructure. 20% see clothing infrastructure. 22.5% have electricity. Overall, there are fewer basic facilities among the farmers in agriculture.

Use of Soil:

Use of soil is essential for various ecological and agricultural processes. It not only supports plant growth by providing essential nutrients but also plays a critical role in water filtration and carbon storage, making it vital for maintaining environmental balance.

SL No	Use of Soil	Frequency	Parentage
01	Black	35	87.5%
02	Red	03	7.5%
03	Loamy Soil	02	5%
Total		**40**	**100**

The above table indicates the extent of soil use in agriculture. Out of a total of 40 people, 87.5 present are cultivating black soil land, 7.5 present are cultivating red soil land, and 5 present are cultivating loamy soil. Overall, farmers in the Sindhanur region are using black soil land in rural areas. This preference for black soil can be attributed to its high fertility and suitability for various crops, which significantly contributes to the region's agricultural productivity. Consequently, understanding soil types and their implications on farming practices will be crucial for future agricultural development initiatives.

Chemical Use

SL No	Use of Soil	Frequency	Parentage
01	Fertilizer	28	70%
02	Pesticides	11.50	28.5%
03	Organics	0.5	1.025%
Total		**40**	**100**

The above table indicates the quantity of agricultural chemicals used. Out of a total of 40 farmers, 70% are using fertilisers, 28.5% are using pesticides, and 1.25% are using pesticides. This graph shows the destruction of agricultural land, soil, and environment. The alarming statistics highlight the urgent need for sustainable farming practices. Implementing eco-friendly alternatives could mitigate the negative impact on both the land and the surrounding ecosystem.

Results:

1. The minimum income of farmers engaged in agriculture is Rs. 100,000, and the maximum income is Rs. 200,000. This income range reflects the varied levels of productivity and market access among farmers. Factors such as crop choice, land quality, and weather conditions significantly influence these earnings.
2. The annual expenditure involved in agriculture is Rs. 35,000, and the maximum expenditure is Rs. 85,000. This expenditure range highlights the financial challenges that farmers face in managing their operations. Effective budgeting and resource management are essentials for optimising returns and ensuring sustainability in the agricultural sector.

3. The annual savings of farmers are 45% per year, from Rs. 23,000 to Rs. 32,000 at the minimum level, and 7.5% above Rs. 58,000. This variability in savings underscores the need for farmers to adopt more strategic financial practices. By focusing on improving efficiency and leveraging technology, they can enhance their profitability and better navigate the uncertainties of the market.
4. Farm workers' health status includes fever at 42.5%, cancer at 35%, diarrhoea at 12.5%, malnutrition at 10%, and more. These health issues point to the need for improved healthcare access and education among farmworkers. Addressing these concerns not only benefits the individuals affected but also contributes to the overall productivity and sustainability of the agricultural sector.
5. The educational status of farmers Illiteracy is 15%, primary education is 30%, secondary education is 25%, pre-university education is 10%, graduation is 12.5%, and 7.5% of the farmers have educational status. This educational landscape underscores the necessity for targeted interventions to enhance farmers' knowledge and skills. By investing in educational programs, we can empower these individuals to adopt more sustainable practices and improve their livelihoods.
6. In agriculture, the basic infrastructure for farmers includes clean drinking water; 20% of the infrastructure is allocated to health, which accounts for 37.5% of the total infrastructure for clothing and 20% for electricity; additionally, 22.5% of the overall infrastructure supports agricultural needs.
7. In happiness, the amount of land farmers do not see property is 5%, 57.5% of the land is seen, 2-10 acres is seen, 22.5% of the land is seen, 10-30 acres is seen, and 15% of the land is above 30 acres. This distribution highlights the vital role that infrastructure plays in supporting various sectors of the economy. Moreover, addressing the needs of farmers and ensuring access to land can significantly enhance their productivity and overall well-being.
8. In agriculture, 70% of the farmers' loans are Levidevi loans, 12.5% from private institutions, and 17.5% from government institutions. In agriculture, an increasing proportion of farmers' loans are Levidevi loans. This trend indicates a growing reliance on alternative financing options, which may offer more flexible terms and quicker access to funds. As farmers adapt to these financial structures, it is essential that they are accompanied by proper guidance and resources to maximise their agricultural outputs.

Suggestions:

1. Collecting and limiting rainwater can protect agriculture, as it also requires water. Furthermore, implementing efficient irrigation techniques can significantly enhance crop yields. This approach conserves water resources and supports sustainable farming practices, ensuring long-term productivity in agriculture.
2. Traditional modern agriculture promotes a green economy by using water efficiently. by using water. Efficient water management and innovative farming techniques can lead to more resilient agricultural systems. By embracing these practices, farmers can not only improve their output but also contribute to environmental conservation and the overall health of the ecosystem.
3. The economical use of chemicals in agriculture impacts agricultural products, which in turn affects food security and food safety. curity and food safety. Ensuring that chemicals are used judiciously enhances the quality of the produce and minimises the risk of harmful residues entering the food chain. This careful approach ultimately supports sustainable practices, fostering a healthier population and environment.

4. The increasing use of various agricultural machinery impacts land use, necessitating a restriction on its use. Restricting machinery use can lead to more sustainable land management practices, allowing for the preservation of soil health and biodiversity. By adopting alternative methods and technologies, farmers can maintain productivity while safeguarding vital ecosystems for future generations.
5. In agriculture, people should participate in activities to create awareness about the green economy. This can be achieved by making farmers and agricultural workers self-reliant in the green economy. Such goals can be achieved through training programs that emphasise sustainable practices and innovation. Furthermore, fostering partnerships between local communities and agricultural organisations can enhance knowledge sharing and support the transition to eco-friendly farming methods.

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